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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,390	12/04/2000	Koji Takahara	0828,64986	6429
24978	7590	11/17/2004	EXAMINER	
GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606			ROCHE, TRENTON J	
			ART UNIT	PAPER NUMBER
			2124	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/729,390

Applicant(s)

TAKAHARA ET AL.

Examiner

Trent J Roche

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This action is responsive to communications filed 27 August 2004.
2. Per applicant's request, amended claims 1, 4, 5, 8 and 11 have been entered. Claims 1-12 are pending.
3. Claims 1-12 have been examined.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 11 recites the limitation "the dynamic variable specifying means" in line 9. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, the claim will be interpreted to read "specifying areas ensured in the case of the target dynamic variable being developed into a memory at the time of executing the load module."
7. Claim 11 recites the limitation "the area specifying means" in line 11. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, the claim will be interpreted to read "initializing the specified areas to a predetermined value."

*Response to Arguments*

8. Applicant's arguments, see pages 8 and 9 of the remarks, filed 21 June 2004, with respect to the rejection(s) of claim(s) 1-9, 11 and 12 under 35 U.S.C. § 102(a) and 35 U.S.C. § 103(a) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art. Consequently, the objection to claim 10 as being dependent upon an allowable base claim is also withdrawn.

*Claim Rejections - 35 USC § 102*

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,590,329 to Goodwin, II et al, hereafter referred to as Goodwin.

**Per claim 1:**

Goodwin discloses:

- an information processing apparatus for translating a source file (Note Figure 1 and the corresponding sections of the disclosure)
- including dynamic variables and static variables ("dynamically allocated memory...static variables..." in col. 20 lines 39-45. Further, note Figure 2b, wherein dynamic variables are shown.)

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- into object files by a compiling process and converting the object files into executable load modules by a linking process (“a compiler...capable of translating source code into an executable format” in col. 5 lines 31-32)
- dynamic variable specifying means for specifying a target dynamic variable from the source file (Note Figure 2b and the corresponding sections of the disclosure.)
- area specifying means for specifying areas ensured in the case of the dynamic variable specified by the dynamic variable specifying means being developed into a memory at the time of executing the load module (“allocate one large block of memory...” in col. 20 line 48)
- initializing means for initializing areas specified by the area specifying means to a predetermined value (“pre-marking all dynamically allocated memory with the hexadecimal value FFFA 5A5A...” in col. 20 lines 39-40)

substantially as claimed.

**Per claim 2:**

The rejection of claim 1 is incorporated, and further, Goodwin discloses area integrating means for integrating areas ensured in the case of a plurality of different dynamic variables specified by the dynamic variable specifying means being developed into the memory as claimed (“the proper range for a pointer that is intended to point to only a smaller piece of the large allocation...” in col. 20 lines 55-57)

**Per claim 3:**

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The rejection of claim 1 is incorporated, and further, Goodwin discloses variable integrating means for integrating the same dynamic variables dispersed in one or more object files integrated by the linking process as claimed (“As the object code is loaded into program memory by the linker at read-time, the internal symbol table is updated to include entries for each symbolic label defined in the object code...” in col. 6 lines 51-55)

**Per claim 4:**

The rejection of claim 3 is incorporated, and further, Goodwin discloses allocating the target dynamic variable to a new data section, and performing an initializing process on a dynamic variable alone allocated to the new data section as claimed (“the pointer ptr\_alloc will include a pointer to the memory allocation structure” in col. 19 lines 45-47. The variable is associated with a new data section in the allocation structure.)

**Per claim 5:**

The rejection of claim 4 is incorporated, and further, Goodwin discloses when a plurality of object files are linked to generate the load module, the initializing means does not perform an initializing process on the dynamic variable which is allocated to the new data section in a predetermined object file and is allocated to an ordinary data section in another object file as claimed (Note Figure 12b. The initializing process 1245 does not occur until after the executable is created.)

**Per claim 6:**

The rejection of claim 1 is incorporated, and further, Goodwin discloses initial-value entering means for entering an initial value used by the initializing means before a compiling process as claimed

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(“pre-defined value that is unlikely to be encountered in most programming applications...the hexadecimal value FFFA 5A5A...” in col. 20 lines 26-30. The value is pre-defined, so there is inherently some initial value entering means to define the value to be used.)

**Per claim 7:**

The rejection of claim 1 is incorporated, and further, Goodwin discloses initial-value entering means for entering an initial value used by the initializing means before executing the load module as claimed (“pre-defined value that is unlikely to be encountered in most programming applications...the hexadecimal value FFFA 5A5A...” in col. 20 lines 26-30. The value is pre-defined, so there is inherently some initial value entering means to define the value to be used.)

**Per claim 8:**

The rejection of claim 1 is incorporated, and further, Goodwin discloses initialized variable specifying means for specifying the dynamic variable on which the initializing process is performed as claimed (Note Figure 12b, item 1240 and the corresponding sections of the disclosure)

**Per claim 9:**

The rejection of claim 1 is incorporated, and further, Goodwin discloses error informing means for informing of an error in the case of a dynamic variable which holds an initial value being referred to at the time of executing the load module as claimed (Note Figure 8, item 800, which is error checking process of the system. The system will report errors based on the use of the predefined hexadecimal value.)

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**Per claim 10:**

The rejection of claim 9 is incorporated, and further, Goodwin discloses memory ensuring means for ensuring memory areas being a predetermined number more than the number of elements of an array declared in source code if the dynamic variable is an array (“array dimension checking subroutine...” in col. 10 line 62), wherein the initializing means initializes all areas in a memory ensured by the memory ensuring means to a predetermined value (“pre-marking all dynamically allocated memory...” in col. 20 lines 40-41), further wherein the error informing means informs of an error in the case of an array which holds the initial value being referred to as claimed (Note Figure 8, item 800, which is error checking process of the system. The system will report errors based on the use of the predefined hexadecimal value.)

**Per claim 11:**

Goodwin discloses:

- a computer-readable record medium recording a computer program for translating a source file (Note Figure 1 and the corresponding sections of the disclosure)
- including dynamic variables and static variables (“dynamically allocated memory...static variables...” in col. 20 lines 39-45. Further, note Figure 2b, wherein dynamic variables are shown.)
- into object files by a compiling process and converting the object files into executable load modules by a linking process (“a compiler...capable of translating source code into an executable format” in col. 5 lines 31-32)
- specifying a target dynamic variable from the source file (Note Figure 2b and the corresponding sections of the disclosure.)



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- specifying areas ensured in the case of the target dynamic variable being developed into a memory at the time of executing the load module (“allocate one large block of memory...” in col. 20 line 48)
- initializing the specified areas to a predetermined value (“pre-marking all dynamically allocated memory with the hexadecimal value FFFA 5A5A...” in col. 20 lines 39-40)

substantially as claimed.

**Per claim 12:**

Goodwin discloses:

- an information processing apparatus for translating a source file (Note Figure 1 and the corresponding sections of the disclosure)
- including an array (“an array” in col. 10 line 53)
- into an object file by a compiling process and converting the object file into an executable load module by a linking process (“a compiler...capable of translating source code into an executable format” in col. 5 lines 31-32)
- area specifying means for specifying a target array from the source file (“a reference to a declared array...” in col. 10 line 48)
- area ensuring means for ensuring, at the time of executing the load module, areas in a memory being a predetermined number of bytes more than areas declared in an array specified by the array specifying means (“array dimension checking subroutine...” in col. 10 line 62)

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- initializing means for initializing areas ensured by the area ensuring means to a predetermined value ("pre-marking all dynamically allocated memory..." in col. 20 lines 40-41)

substantially as claimed.

### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trent J Roche whose telephone number is (571)272-3733. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571)272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trent J Roche  
Examiner  
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